

Database Testing

- ❖ **Module 1: Database concepts primer**
 - What is a Database Application?
 - Testing the Application vs. Testing the DBMS
 - Back-end vs. Front End Testing
 - QA'ing Data- Who is responsible?
 - What should we test in the Database
 - Knowledge required for the Database Tester
 - Database Testing Phases
 - Database Testing Methodologies
 - Structural Database Testing
 - Functional Database Testing

- ❖ **Module 2: Basic SQL (Structured Query Language)**
 - SQL Coding Standards -- what you need to know
 - SQL Basics: Select, Insert, Update and Delete
 - Using the Select Statement to Test data
 - Using the Insert Statement to generate Test data
 - Testing for application accuracy using the Update and Delete statements
 - Testing for basic data integrity using Constraints

- ❖ **Module 3: Testing with SQL**
 - Joining tables
 - Useful SQL Queries for Data Verification
 - How Concurrency Issues affect data accuracy
 - Database objects:
 - Views
 - Indexes
 - Stored procedures
 - Triggers
 - User-Defined Functions
 - Testing Stored procedures using SQL
 - Testing Triggers and functions
 - Performance Testing using SQL
 - Additional Areas to Test
 - Uncovering corrupt data bugs with SQL

- ❖ **Module 4: Using SQL in Scripting Languages**
 - Structural Database Testing using TOAD Tool
 - Database schema tests
 - ✓ Databases and devices
 - ✓ Tables, columns, column types, defaults, and rules
 - ✓ Keys and indexes
 - Stored procedure tests
 - ✓ Individual procedure tests
 - ✓ Integration tests of procedures
 - Trigger tests
 - ✓ Testing Update triggers
 - ✓ Testing Insert triggers
 - ✓ Testing Delete triggers

- Integration tests of SQL server
- Functional Database Testing Using QTP with VBScript
 - Dividing back end based on functionality
 - Checking data integrity and consistency
 - Test back end via front end
- Login and user security
- Stress Testing
- Catching common Database application hacks:
 - Test cases protecting against SQL Injection and other common hacks
- Session Wrap-Up
- Summary
- Final Questions